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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* REBECCA L. POOLE, LAURENCE E. ENGLAND, and  
HOWARD J. GLASER

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Appeal 2007-3353  
Application 09/939,813  
Technology Center 2100

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Decided: December 19, 2007

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Before LANCE LEONARD BARRY, JAY P. LUCAS, and  
ST. JOHN COURTENAY III, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-24. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

## THE INVENTION

The disclosed invention relates generally to programming development environments performed by computers, and, more particularly, to the use of a program development environment for Internet and Intranet applications (Spec. 1). Appellants' invention comprises a computer-implemented Integrated Development Environment (IDE) for constructing a multi-tier business application for a multiple tier computer network. The IDE is used to create and maintain the multi-tier business application quickly and easily on the multiple tier computer network (Spec. 2).

Independent claim 1 is illustrative:

1. A computer-implemented system of developing multi-tier business applications, comprising:

an Integrated Development Environment (IDE), executed by a computer, for creating and maintaining a multi-tier business application on a multiple tier computer network, wherein the IDE includes a Topological Multi-Tier Business Application Composer that is used by a developer to graphically create and maintain the multi-tier business application, the Composer includes a window and a palette, the palette contains graphical constructs representing tiers and components of the tiers that are used to create and maintain a graphical presentation of the multi-tier business application in the window, and when creating the multi-tier business application, the developer decides on a number of tiers, identifies workstations and servers within each of the tiers, and defines processing performed by each tier and its components.

### THE REFERENCES

The Examiner relies upon the following references as evidence in support of the rejection:

Sheard	US 6,208,345 B1	Mar. 27, 2001
Green	US 6,854,107 B2	Feb. 8, 2005

### THE REJECTION

Claims 1-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Sheard in view of Green.

### PRINCIPLES OF LAW

“What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007). To be nonobvious, an improvement must be “more than the predictable use of prior art elements according to their established functions.” *Id.* at 1740. Appellants have the burden on appeal to the Board to demonstrate error in the Examiner’s position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)). Therefore, we look to Appellants’ Briefs to show error in the proffered *prima facie* case.

Combinability under 35 U.S.C. § 103

At the outset, we note that Appellants have presented no arguments directed to the combinability of the Sheard and Green references. Accordingly, Appellants have waived any such arguments, and the combinability of the references will not be addressed here. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2006) (“Any arguments or authorities not included in the brief or a reply brief filed pursuant to § 41.41 will be refused consideration by the Board, unless good cause is shown.”).

ISSUE(S)

We decide the question of whether Appellants have shown the Examiner erred in holding that the cited combination of prior art would have rendered the claimed subject matter obvious to an artisan having ordinary

skill and common sense at the time of the invention.<sup>1</sup> More particularly, we have determined the following issue is dispositive in this appeal:

Whether Appellants have shown the Examiner erred in finding that the proffered combination of Sheard and Green teaches and/or suggests the argued limitations of:

[D]eciding on the number of tiers, identifying workstations and servers within each of the tiers, and defining processing performed by each tier and its components, in the context of an Integrated Development Environment (IDE), that includes a Topological Multi-Tier Business Application Composer, which is used by a developer to graphically create and maintain a multi-tier business application, and includes a window and a palette, the palette contains graphical constructs representing tiers and components of the tiers that are used to create and maintain a graphical representation of the multi-tier business application in the window.

(See App. Br. 10).

## ANALYSIS

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<sup>1</sup> “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Moreover, ““there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ . . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 127 S. Ct. at 1741 (quoting *In re Kahn*, 441 F.3d at 988).

Appeal 2007-3353  
Application 09/939,813

Elements under 35 U.S.C. § 103

We consider the Examiner's rejection of claims 1-24 as being unpatentable over the teachings of Sheard in view of Green. Since Appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we select independent claim 1 as the representative claim for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2006).

Appellants argue:

Sheard and Green do not teach or suggest deciding on the number of tiers, identifying workstations and servers within each of the tiers, and defining processing performed by each tier and its components, in the context of an Integrated Development Environment (IDE), that includes a Topological Multi-Tier Business Application Composer, which is used by a developer to graphically create and maintain a multi-tier business application, and includes a window and a palette, the palette contains graphical constructs representing tiers and components of the tiers that are used to create and maintain a graphical representation of the multi-tier business application in the window.

(App. Br. 10).

The Examiner disagrees. The Examiner responds by mapping each claim element to the corresponding section(s) of the Sheard and Green references (Ans. 3-7).

We begin our analysis by noting that the argued steps of “*deciding* on the number of tiers, *identifying* workstations and servers within each of the tiers, and *defining* processing performed by each tier and its components” are each performed by a human developer in the context of the claimed computer-implemented system (*see* App. Br. 10, emphasis added). Thus, the mental steps performed by the human developer of *deciding*, *identifying*, and *defining* do not perform a transformation of physical subject matter, and if considered alone, are directed to an unpatentable mental process (i.e., an abstract idea).<sup>2</sup>

In contrast, we note that the preamble of claim 1 recites a “computer-implemented system” with the recited intended purpose of “developing multi-tier business applications . . . ;” (claim 1). Therefore, we find it unclear whether the language of claim 1 is directed to a computer-implemented system or a method of using that system. Our reviewing court has determined that a claim directed to a system and a method for using that system is indefinite. *See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005). *See also S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1372 (Fed. Cir. 2001) (“When the claims become so ambiguous that one of ordinary skill in the art cannot determine their scope absent speculation, such claims are invalid for indefiniteness.”) (citing *In re Steele*,

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<sup>2</sup> The Supreme Court has specifically identified three categories of unpatentable subject matter: “laws of nature, natural phenomena, and abstract ideas.” *See Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

305 F.2d 859, 862-63 (CCPA 1962)).

Here, we conclude that claim 1 does not reasonably apprise those skilled in the art of its scope. On one hand, Appellants present a preamble directed to a computer-implemented system (*see* claim 1). However, in the Brief, Appellants argue the mental steps of “deciding on the number of tiers, identifying workstations and servers within each of the tiers, and defining processing performed by each tier and its components,” as performed by a human developer *in the context* of the claimed computer-implemented system (*see* App. Br. 10). Because a claim cannot be directed to both a system (apparatus) and a method for using that system, for purposes of our review we shall construe the claim as a computer-implemented system. *See IPXL Holdings* at 1384. We consider the recited mental steps performed by the developer as a statement of intended use that impermissibly sets forth a method for using the computer-implemented system within the context of an apparatus claim (claim 1). Therefore, we decline to give patentable weight to the mental steps argued by Appellants in the Briefs.<sup>3</sup>

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<sup>3</sup> We decline to give the mental steps performed by the developer patentable weight because they constitute a statement of intended use that renders the apparatus claim indefinite. *See IPXL Holdings* at 1384. We do not ground this decision on the basis that the mental steps are directed to non-statutory subject matter. *Cf. In re Miller*, 418 F.2d 1392, 1396 (CCPA 1969) (“The fact that printed matter by itself is not patentable subject matter, because non-statutory, is no reason for ignoring it when the claim is directed to a combination.”).

When we construe the language of the claim directed to the computer-implemented system, we find the evidence before us supports the Examiner's position. We agree with the Examiner that Sheard teaches an Integrated Development Environment, as claimed (*see* Sheard, Fig. 17, col. 3, ll. 16-18, i.e., "A visual interface facilitates the design, deployment, and runtime monitoring of an integrated information system implementation."). Regarding the claimed "Topological Multi-Tier Business Application Composer," our reviewing court has determined that "[w]here an inventor chooses to be his own lexicographer and to give terms uncommon meanings, he must set out his uncommon definition in some manner within the patent disclosure" so as to give one of ordinary skill in the art notice of the change. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (*quoting Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88 (Fed. Cir. 1992)). Here, while the Specification does give an example explaining how the claimed "Topological Multi-Tier Business Application Composer" may be used,<sup>4</sup> we nevertheless find the Specification does not clearly set forth a specialized definition. Because Appellants fail to argue a specialized definition for this term in the Briefs, we find Appellants have not persuasively rebutted the Examiner's findings of fact (*see* Answer 4). We further agree with the

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<sup>4</sup> *See* Spec. p. 3, l. 28 through p. 4, l. 3, i.e., "The IDE includes a Topological Multi-Tier Business Application Composer and associated Meta-model, wherein the Composer allows the developer to graphically design, develop, maintain, build, test, debug, and deploy the multi-tier business application and the graphical representation of the multi-tier business application is then persistently stored in the Meta-model."

Examiner that Sheard reasonably teaches and/or suggests a window and a palette, as shown in Figure 17 (*see* Answer 5).

Regarding the claimed “tiers,” we construe this term in accordance with the broadest reasonable interpretation consistent with the specification. *See In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000) (“during examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification.”). When we look to the Specification for *context*, we find Appellants broadly disclose that “any tier 12, 18, or 20 may include any component or combination of components.” (Spec. 5, ll. 2-3). The Examiner finds Sheard teaches and/or suggest tiers, as shown by the fourth level of nodes 560 that indicates details of components (Fig. 17, col. 24, ll. 65-66). *See also* col. 24, ll. 63-64, i.e., “A third level of nodes 558 indicates the various components operating on a particular workstation.”

As pointed out by the Examiner, the secondary Green reference expressly teaches a method and system for designing an N-tier software architecture (*see* Ans. 6-7). Thus, contrary to Appellants’ arguments, we find the weight of the evidence supports the Examiner’s finding that the proffered combination of Sheard and Green also teaches and/or suggests “graphical constructs representing tiers and components of the tiers that are used to create and maintain a graphical presentation of the multi-tier business application in the window,” as claimed (*see* claim 1).

For at least the aforementioned reasons, we conclude Appellants have not established that the Examiner erred with respect to establishing a prima facie case of obviousness. Therefore, we sustain the Examiner's rejection of representative claim 1 as being unpatentable over Sheard in view of Green for essentially the same reasons set forth in the Answer, and as discussed above.

Pursuant to 37 C.F.R. § 41.37(c)(1)(vii), we have decided the appeal with respect to the remaining claims in this group on the basis of the selected claim alone. Thus, we sustain the Examiner's rejection of claims 2-24 as being unpatentable over Sheard in view of Green for the same reasons discussed *supra* with respect to representative claim 1.

#### CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that Appellants have not shown the Examiner erred in rejecting claims 1-24 under 35 U.S.C. § 103(a) for obviousness.

Appeal 2007-3353  
Application 09/939,813

#### OTHER ISSUE

In the event prosecution is reopened in this application, we leave it to the Examiner to consider a rejection under 35 U.S.C. §112, second paragraph, consistent with this Decision.

#### DECISION

The decision of the Examiner rejecting claims 1-24 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

clj

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